What is claimed is:

[Claim 1] A method of driving an electro-optic display having a plurality of pixels each of which is capable of displaying at least three gray levels, the method comprising:

displaying a first image on the display; and

rewriting the display to display a second image thereon by applying to each pixel a waveform effective to cause the pixel to change from an initial gray level to a final gray level,

wherein, for all pixels undergoing non-zero transitions, the waveforms applied to the pixels have their last period of non-zero voltage terminating at substantially the same time.

[Claim 2] A method according to claim 1 wherein at least one pixel undergoes a zero transition during which there is applied to that pixel at least one period of non-zero voltage, and wherein the last period of non-zero voltage applied to the pixel undergoing the zero transition terminates at substantially the same time as the last period of non-zero voltage applied to the pixels undergoing a non-zero transition.

[Claim 3] A method according to claim 1 wherein the waveforms applied to the pixels have a last period of non-zero voltage of the same duration.

[Claim 4] A method according to claim 3 wherein the waveforms applied to the pixels comprise a plurality of pulses, and the transitions between pulses occur at substantially the same time in all waveforms.

[Claim 5] A method according to claim 1 wherein the electro-optic display is bistable.

[Claim 6] A method according to claim 5 wherein the electro-optic display comprises an electrochromic or rotating bichromal member electro-optic medium.

[Claim 7] A method according to claim 5 wherein the electro-optic display comprises an encapsulated electrophoretic medium.

[Claim 8] A method according to claim 5 wherein the electro-optic display comprises a microcell electrophoretic medium.

[Claim 9] A method according to claim 1 wherein the electro-optic display comprises a layer of electro-optic material having first and second electrodes on opposed sides thereof, and the spacing between the first and second electrodes is at least about twice the spacing between adjacent pixels of the display.

[Claim 10] A method according to claim 9 wherein the first electrode extends across a plurality of pixels, and a plurality of second electrode are provided, each second electrode defining one pixel of the display, the second electrodes being arranged in a two-dimensional array.

[Claim 11] A method according to claim 1 wherein the rewriting of the display is effected by scanning the display at a rate of at least about 50 Hz.

[Claim 12] A method according to claim 1 wherein the rewriting of the display is effected by applying to each pixel any one or more of the voltages -V, 0 and +V, where V is an arbitrary voltage.

[Claim 13] A method according to claim 1 wherein the rewriting of the display is effected such that, for any series of transitions undergone by a pixel, the integral of the applied voltage with time is bounded.

[Claim 14] A method according to claim 1 wherein the rewriting of the display is effected such that the impulse applied to a pixel during a transition depends only upon the initial and final gray levels of that transition.

[Claim 15] A method according to claim 1 wherein at least one waveform has as its last period of non-zero voltage a series of pulses of alternating polarity.

[Claim 16] A method according to claim 15 wherein the voltage applied during the pulses of alternating polarity is equal to the highest voltage used during the waveform.

[Claim 17] A method according to claim 15 wherein the duration of each of the pulses of alternating polarity is not greater than about one-tenth of the

duration of a pulse needed to drive a pixel from one extreme optical state to the other.

[Claim 18] A method of driving an electro-optic display having a plurality of pixels each of which is capable of displaying at least two gray levels, the method comprising:

displaying a first image on the display; and

rewriting the display to display a second image thereon by applying to each pixel a waveform effective to cause the pixel to change from an initial gray level to a final gray level,

wherein the rewriting of the display is effected by scanning the display at a rate of at least about 50 Hz.

[Claim 19] A method according to claim 18 wherein the rewriting of the display is effected by scanning the display at a rate of at least about 60 Hz.

[Claim 20] A method according to claim 18 wherein the rewriting of the display is effected by scanning the display at a rate of at least about 75 Hz.

[Claim 21] A method according to claim 18 wherein the electro-optic layer is bistable.

[Claim 22] A method according to claim 21 wherein the electro-optic display comprises an electrochromic or rotating bichromal member electro-optic medium.

[Claim 23] A method according to claim 21 wherein the electro-optic display comprises an encapsulated electrophoretic medium.

[Claim 24] A method according to claim 21 wherein the electro-optic display comprises a microcell electrophoretic medium.

[Claim 25] A method according to claim 18 wherein the electro-optic display comprises a layer of electro-optic material having first and second electrodes on opposed sides thereof, and the spacing between the first and second electrodes is at least about twice the spacing between adjacent pixels of the display.

[Claim 26] A method according to claim 25 wherein the first electrode extends across a plurality of pixels, and a plurality of second electrode are provided, each second electrode defining one pixel of the display, the second electrodes being arranged in a two-dimensional array.

[Claim 27] A method according to claim 18 wherein the electro-optic display comprises a layer of electro-optic material having first and second electrodes on opposed sides thereof, the first electrode extends across a plurality of pixels, and a plurality of second electrode are provided, each second electrode defining one pixel of the display, the second electrodes being disposed in a plurality of rows, and wherein the scanning of the display is effected by selecting each row in succession, one complete scan of the display being the period required to select all rows of the display.

[Claim 28] A method according to claim 18 wherein the rewriting of the display is effected by applying to each pixel any one or more of the voltages -V, 0 and +V.

[Claim 29] A method according to claim 18 wherein the rewriting of the display is effected such that, for any series of transitions undergone by a pixel, the integral of the applied voltage with time is bounded.

[Claim 30] A method according to claim 18 wherein the rewriting of the display is effected such that the impulse applied to a pixel during a transition depends only upon the initial and final gray levels of that transition.

[Claim 31] A method according to claim 18 wherein, for at least one pixel, the rewriting of the display terminates by applying two the pixel a last period of non-zero voltage comprising a series of pulses of alternating polarity.

[Claim 32] A method according to claim 31 wherein the voltage applied during the pulses of alternating polarity is equal to the highest voltage used during the waveform.

[Claim 33] A method according to claim 31 wherein the duration of each of the pulses of alternating polarity is not greater than about one-tenth of the duration of a pulse needed to drive a pixel from one extreme optical state to the other.

[Claim 34] An electro-optic display having a plurality of pixels, each of which is capable of displaying at least three gray levels, at least one pixel electrode being associated with each pixel and capable of applying an electric field thereto, and drive means for applying waveforms to the pixel electrodes, the drive means being arranged so that, for all pixels undergoing non-zero transitions, the waveforms applied to the pixels have their last period of non-zero voltage terminating at substantially the same time.

[Claim 35] An electro-optic display having a plurality of pixels, each of which is capable of displaying at least two gray levels, the pixels being divided into a plurality of groups, at least one pixel electrode being associated with each pixel and capable of applying an electric field thereto, and drive means for applying waveforms to the pixel electrodes, the drive means being arranged to select each of the groups of pixels in turn, wherein all the groups of pixels are selected within a period of not more than about 20 milliseconds.